

Serial No. **10/574,656**

Docket No. **K-0789**

Amdt. dated December 2, 2008

Reply to Office Action of September 2, 2008

### **REMARKS/ARGUMENTS**

Claims 1-20 and 22-25 are pending. By this Amendment, claims 1-6, 8, 10-14, 17-20, and 22-25 are amended, and claim 21 is canceled without prejudice or disclaimer. No new matter has been added. Support for claims can be found throughout the specification, including the original claims, and the drawings. Reconsideration in view of the above amendments and following remarks is respectfully requested.

The Office Action objected to claims 1-25 for informalities. The claims have been amended to address the Examiner's comments. Accordingly, the objection should be withdrawn.

The Office Action rejected claims 1 and 7 under 35 U.S.C. §102(b) as being anticipated by Jeon, U.S. Patent No. 5,941,085. The rejection is respectfully traversed.

Independent claim 1 recites, *inter alia*, a fan in the cold air duct that selectively directs the cold air in an upward or downward direction and an open/close device that selectively opens and closes a space containing the evaporator, the defrosting heater, and the fan positioned therein, wherein the open/close device is configured to be rotated by a force of a flow of the cold air generated by rotation of the fan. Schenk does not disclose or suggest such features, or the claimed combination of independent claim 1.

That is, the Examiner corresponds element 185 (disclosed by Jeon as a motor) to the claimed fan and element 290 (disclosed by Jeon as a valve) to the claimed open/close device of independent claim 1. However, Jeon teaches that motor 185 drives fan 180 to blow chilled air

into the freezer compartment 120. See col. 5, lines 1-5 of Jeon. Jeon does not disclose that fan 185 is capable of selectively directing cold air in an upward or downward direction. Further, valve 290 only closes opening 155 into the freezing compartment. See col. 5, lines 52-58 of Jeon. Thus, valve 290 alone is not capable of selectively opening and closing the space containing the evaporator 160, the heater 170, and the fan 180. Return passages 125, 135 remain open even when the valve 290 is closed. Additionally, there is no disclosure or suggestion in Jeon that valve 290 is configured to be rotated by a force of a flow of the cold air generated by rotation of the fan 180.

Accordingly, the rejection of independent claim 1 over Jeon should be withdrawn. Dependent claim 7 is allowable over Jeon at least for the reasons discussed above with respect to independent claim 1, from which it depends, as well as for its added features.

The Office Action rejected claims 1, 10-13, 17-20, and 22 under 35 U.S.C. §103(a) as being unpatentable over Schenk et al. (hereinafter "Schenk"), U.S. Patent No 6,694,754, in view of Carlstedt et al. (hereinafter "Carlstedt"), U.S. Patent No. 5,765,384. The rejection is respectfully traversed.

Independent claim 1 recites, *inter alia*, a fan in the cold air duct that selectively directs the cold air in an upward or downward direction and an open/close device that selective opens and closes a space containing the evaporator, the defrosting heater, and the fan positioned therein, wherein the open/close device is configured to be rotated by a force of a flow of the cold air

generated by rotation of the fan. Independent claim 12 recites, *inter alia*, an evaporator disposed in the cold air duct, the evaporator comprising at least one refrigerant pipe configured to receive a refrigerant that flows therethrough, and a plurality of fins in contact with the at least one refrigerant pipe, at least one defrosting heater in contact with one or more of the plurality of fins for selective emission of heat, and an open/close device provided at an upper portion and a lower portion of a space containing the evaporator and the defrosting heater positioned therein, that opens and closes the space.

The Examiner asserts that Schenk discloses all of the claimed features of independent claims 1 and 12 except that "Schenk [ ] fails to disclose at least one defrosting heater in the cold air duct in contact with the fins for selective emission of heat." The Examiner then asserts that Schenk teaches these features and argues that "[i]t would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the refrigerator of Schenk [ ] to include the defrost heater as taught by Carlstedt [ ] in order to prevent ice buildup on the evaporator from clogging the cold air duct, thus increasing cooling efficiency."

However, with respect to independent claim 1, as set forth above, Schenk fails to disclose or suggest a fan in the cold air duct that selectively directs the cold air in an upward or downward direction and an open/close device that selectively opens and closes a space containing the evaporator, the defrosting heater, and the fan positioned therein, wherein the open/close device is configured to be rotated by a force of a flow of the cold air generated by

rotation of the fan, or the claimed combination of independent claim 1. Carlstedt fails to overcome the deficiencies of Schenk.

With respect to independent claim 12, Shenk does not disclose or suggest an open/close device provided at an upper portion and a lower portion of a space containing the evaporator and the defrosting heater positioned therein, that opens and closes the space. Further, Carlstedt does not disclose or suggest at least one defrost heater in contact with one or more of the plurality of fins for selective emission of heat. Rather, Carlstedt discloses an evaporator 10 comprising a tubular element 12 through which refrigerant flows and having an inner pipe 16 and an outer pipe 22. A heating cable 20 is arranged between the inner pipe 16 and the outer pipe 22. A defrost operation is performed by the resistance wire disposed within the tubular element 12. See column 1, lines 55-67 of Carlstedt. However, Carlstedt does not disclose at least one defrosting heater in contact with one or more of the plurality of fins for selective emission of heat, as recited in independent claim 12.

Accordingly, the rejection of independent claims 1 and 12 over Schenk and Carlstedt should be withdrawn. Dependent claims 10-11, 13, 17-20, and 22 are allowable over Schenk and Carlstedt at least for the reasons discussed above with respect to independent claims 1 and 12, from which they respectively depend, as well as for their added features.

The Office Action rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Jeon in view of Schenk. The rejection is respectfully traversed.

The Office Action rejected claims 3-6 under 35 U.S.C. §103(a) as being unpatentable over Jeon and Schenk, and further in view of Kim et al. (hereinafter "Kim"), U.S. Patent No 5,987,904. The rejection is respectfully traversed.

Dependent claims 3-6 are allowable over Jeon and Schenk at least for the reasons discussed above with respect to claim 2, from which they depend, as well as for their added features. Kim fails to overcome the deficiencies of Jeon and Schenk, as it is merely cited for allegedly teaching providing a supporting plate having a plurality of openings and a plurality of rotating plates (claim 3) and the related features of claims 4-6. Accordingly, the rejection of claims 3-6 over Jeon, Schenk, and Kim should be withdrawn.

The Office Action rejected claim 9 under 35 U.S.C. §103(a) as being unpatentable over Jeon and further in view of Block (hereinafter "Block"), U.S. Patent Publication No. 2002/0192075. The rejection is respectfully traversed.

Dependent claim 9 is allowable over Jeon at least for the reasons discussed above with respect to independent claim 1, from which it depends, as well as for its added features. Block fails to overcome the deficiencies of Jeon, as it is merely cited for allegedly teaching a defrosting heater fabricated as one unit with a fan. Accordingly, the rejection of claim 9 over Jeon and Block should be withdrawn.

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The Office Action rejected claim 14 under 35 U.S.C. §103(a) as being unpatentable over Schenk and Carlstedt, and further in view of Lindseth (hereinafter "Lindseth"), U.S. Patent No. 2,000,467. The rejection is respectfully traversed.

Dependent claim 14 is allowable over Schenk and Carlstedt at least for the reasons discussed above with respect to independent claim 12, from which it depends, as well as for its added features. Lindseth fails to overcome the deficiencies of Schenk and Carlstedt, as it is merely cited for allegedly teaching a heating element made of carbon. Accordingly, the rejection of claim 14 over Schenk, Carlstedt, and Lindseth should be withdrawn.

The Office Action rejected claims 15 and 16 under 35 U.S.C. §103(a) as being unpatentable over Schenk and Carlstedt, and further in view of Komatsu (hereinafter "Komatsu"), U.S. Patent No. 5,594,585. The rejection is respectfully traversed.

Dependent claims 15 and 16 are allowable over Schenk and Carlstedt at least for the reasons discussed above with respect to independent claim 12, from which they depend, as well as for their added features. Komatsu fails to overcome the deficiencies of Schenk and Carlstedt, as it is merely cited for allegedly teaching a film formed of PET material and a defrosting heater which is a PTC device. Accordingly, the rejection of claims 15 and 16 over Schenk, Carlstedt, and Komatsu should be withdrawn.

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The Office Action rejected claim 21 under 35 U.S.C. §103(a) as being unpatentable over Schenk and Carlstedt, and further in view of Jeon. Claim 21 has been canceled. Accordingly, this rejection is moot.

The Office Action rejected claim 23-25 under 35 U.S.C. §103(a) as being unpatentable over Schenk, Carlstedt, and Jeon, and further in view of Kim. The rejection is respectfully traversed.

Dependent claims 23-25 is allowable over Schenk, Carlstedt, and Jeon at least for the reasons discussed above with respect to independent claim 12, from which they depend, as well as for their added features. Kim fails to overcome the deficiencies of Schenk, Carlstedt, and Jeon, as it is merely cited for allegedly teaching providing a supporting plate having a plurality of openings and a plurality of rotating plates (claim 3) and the related features of claims 4-6. Accordingly, the rejection of claims 23-25 over Schenk, Carlstedt, Jeon, and Kim should be withdrawn.

### **CONCLUSION**

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

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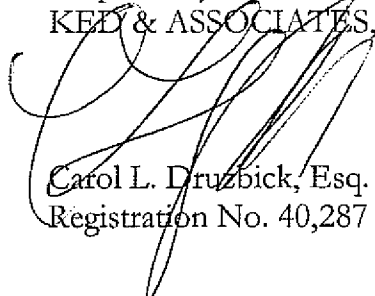
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In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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**Date: December 2, 2008**

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